

PERMIT APPLICATION NUMBER: NRS#04.246

APPLICANT: Naval Support Activity Mid-South
Code 0101 5722 Integrity Drive
Millington, Tennessee 38054-0306
(901) 874-5902

LOCATION: The proposed project is located at Naval Support Activity Mid-South (formerly Millington Naval Air Station), east of the Town of Millington, along unnamed channelized tributaries to Big Creek Drainage Canal, Shelby County, Tennessee.

WATERSHED DESCRIPTION: Big Creek Drainage Canal is located in the Loosahatchie River Watershed. This moderately entrenched, channelized tributary drains storm water inputs from an approximately 244-acre watershed as it reaches Singleton Avenue culvert and has increased to a 393-acre watershed by the time it reaches Honor Drive culvert. The channelized tributary banks are being actively eroded increasing sediment loading to the channel and impeding flow. Inputs include not only upstream sources, but the numerous storm water outfalls along the subject waterway. Channel widths range from 2 to 8 feet with steep sloping banks along most of its run. Water depths average 6 inches with deeper pools (18-24 inches) at the outfalls. Substrate in the channel is soft, fine-grained sediment and the banks are primarily a loose, alluvial soil.

DESCRIPTION: The proposed project is stabilization and maintenance of two unnamed channelized tributaries to prevent further bank erosion and improve drainage flow along the reach. This project also addresses a public health concern. Water frequently stagnates along the subject waterways and creates breeding areas for mosquitoes which may carry the West Nile Virus. The waterways pass several public areas and therefore the stagnant water creates an unacceptable risk to base personnel. The applicant is seeking to improve and stabilize approximately 1,500 linear of this onsite drainage system. The majority of improvements are proposed along 1,300 feet of the main channel from the large double box culvert beneath Singleton Avenue south of Building s-786 east 300 feet to Courage Drive, then continuing 1000 feet to Honor Drive. The remainder of work is proposed along the lower 200 feet of a second smaller unnamed channel, also starting from its culvert beneath Singleton Avenue to the confluence with the first channel. The upstream portion of the waterways forms a "Y" as each channel emerges from culverts beneath Singleton Avenue and converge to a single channel that runs beneath Courage Drive, past the base post office, then beneath Honor Drive, and ultimately to Big Creek Drainage Canal. The channel's south bank will be reshaped to a 2:1 slope, lined with geotextile fabric and hard-armored with 90 lb. riprap. The channel's northern bank will have 90 lb. riprap placed up to 50 linear feet on both sides of three outfall structures for their protection. Using a backhoe or similar mechanized earthmoving equipment, the accumulated sediment, debris and vegetation in the channel will be removed to restore channel contour to its previous condition and allow unobstructed flow. The channel improvements will also reduce or eliminate the occurrence of stagnating water that might support mosquito larvae.

PERMIT COORDINATOR: Dorsey Horne, STATE OF TENNESSEE, Department of Environment and Conservation, Division of Water Pollution Control, 7th Floor, L & C Annex, 401 Church Street, Nashville, Tennessee 37243-1534

USGS QUAD: MILLINGTON 408 SW and BRUNSWICK 408SE, TENNESSEE

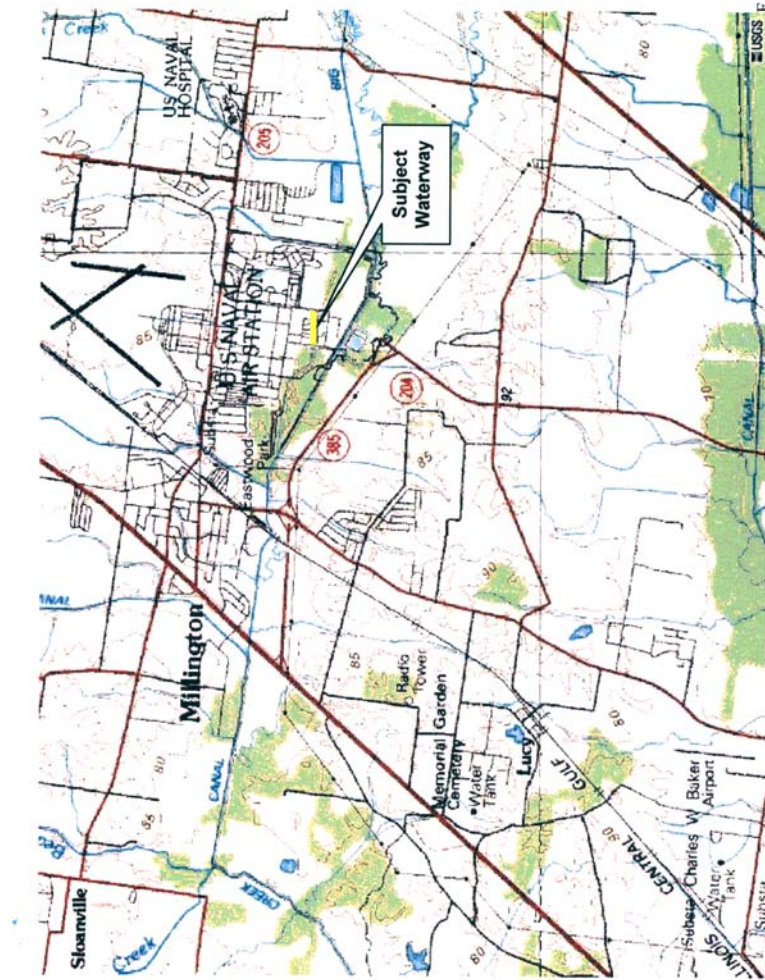


Figure 1 – Vicinity Map (Millington Topographic Map; July 1986)

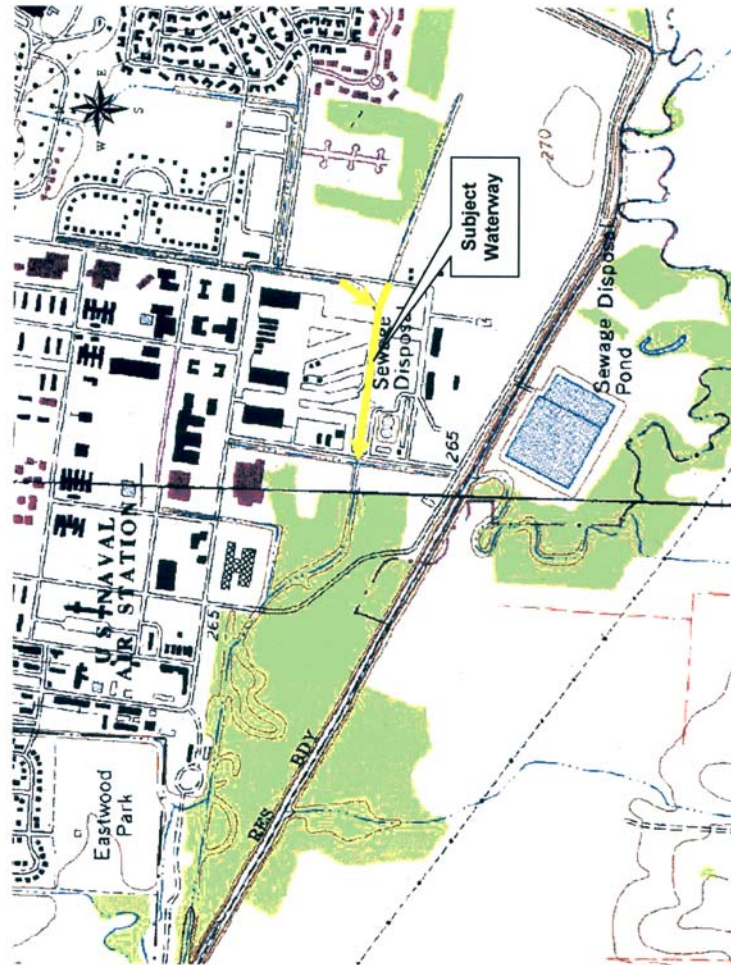


Figure 2 – Site Map (Millington, TN Quad; July 1993)



Figure 3 – Aerial Photo (January 2001)

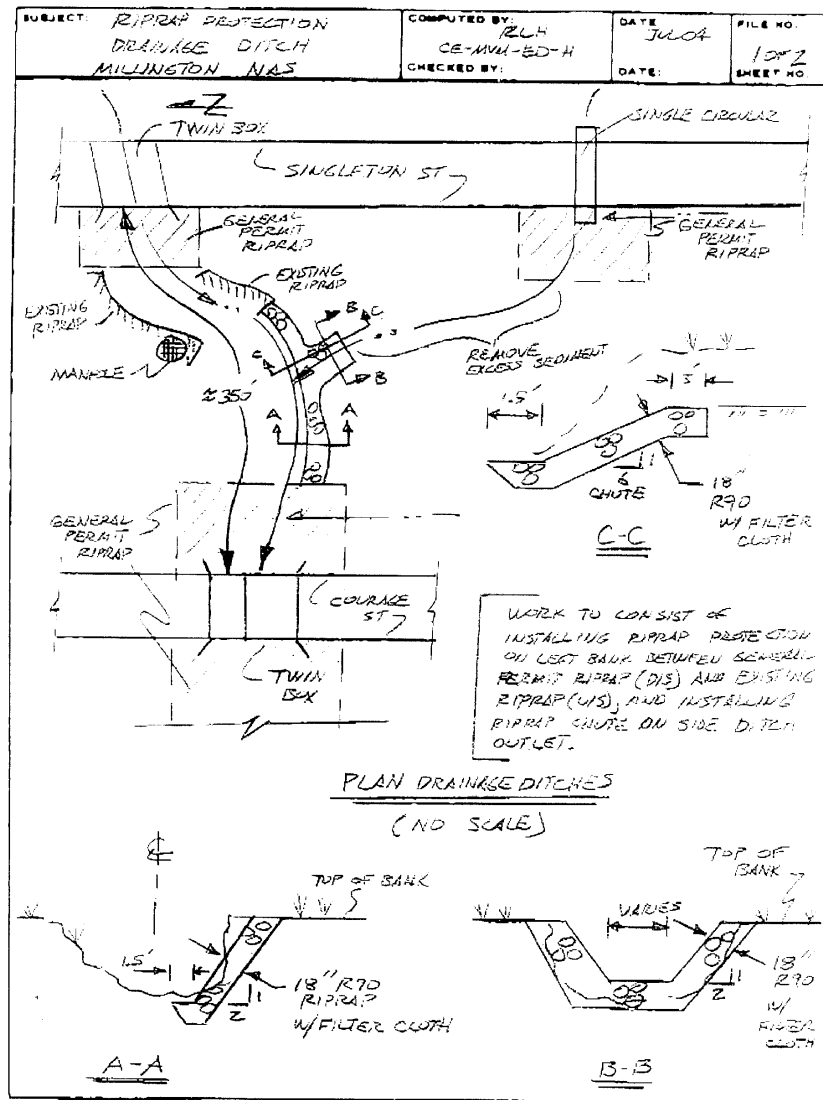
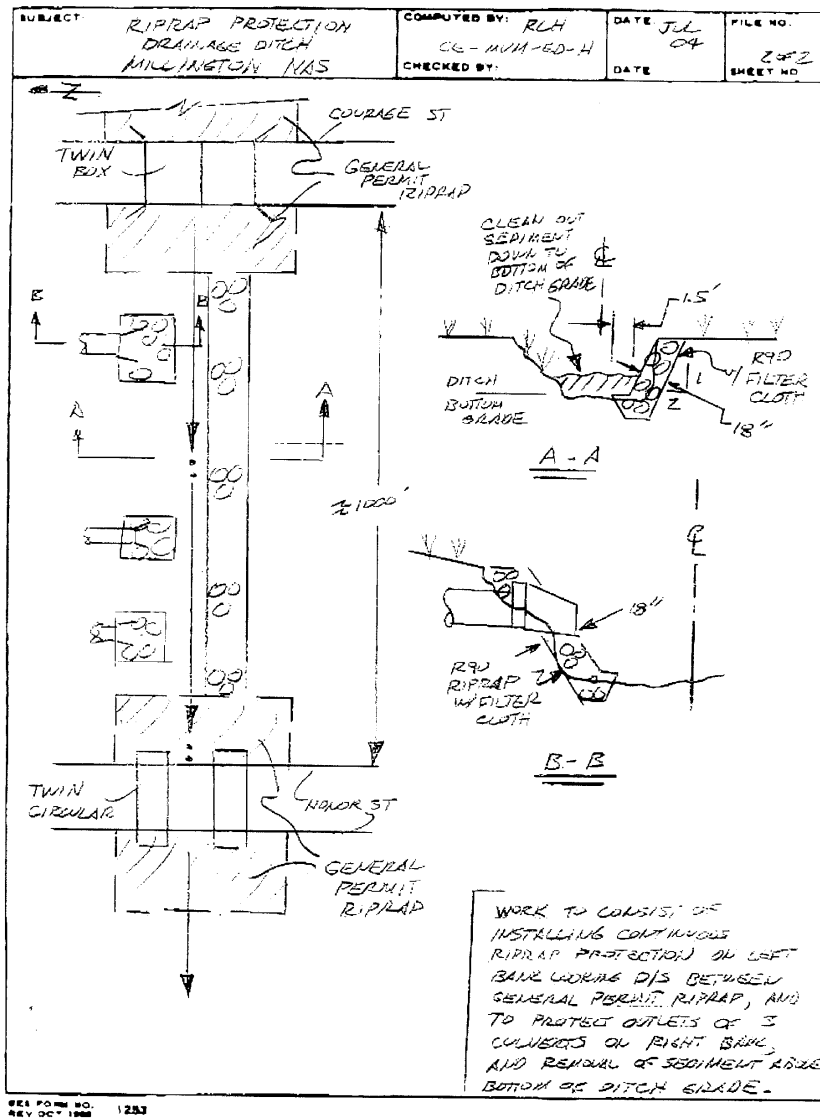


Figure 4—Corp of Engineer Conceptual Design
 (Singleton Parkway to Courage Drive)

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